

CLAIMS

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. An antenna configuration, comprising:

at least three portions substantially aligned in a first direction and coupled together by at least a first two portions substantially aligned in a second direction substantially orthogonal to said first direction; and

at least a second two portions substantially aligned in said second direction and respectively coupled to at least two of said at least three portions substantially aligned in said first direction, wherein

electromagnetic fields to be radiated by said at least a first two portions substantially aligned in said second direction are substantially cancelled out by each other, and wherein

electromagnetic fields to be radiated by each of said at least three portions substantially aligned in said first direction are substantially in-phase with each other.

2. The antenna configuration of claim 1, wherein at least one of said at least three portions substantially aligned in said first direction comprises a power source.

3. The antenna configuration of claim 2, wherein said power source comprises a radio-frequency source.

4. The antenna configuration of claim 2, wherein at least two of said at least three portions substantially aligned in said first direction are spaced approximately 180-degrees from said power source.

5. The antenna configuration of claim 1, wherein said at least a second two portions substantially aligned in said second direction are approximately 90-degrees in length.

6. The antenna configuration of claim 5, wherein electromagnetic fields radiated by said at least a second two portions substantially aligned in said second direction are substantially cancelled out by each other.

7. The antenna configuration of claim 1, wherein said at least a second two portions substantially aligned in said second direction are approximately 180-degrees in length.

8. The antenna configuration of claim 7, wherein electromagnetic fields radiated by said at least a second two portions substantially aligned in said second direction are substantially cancelled out by each other.

9. The antenna configuration of claim 2, wherein
said at least a first two portions substantially aligned in said second direction are approximately 90-degrees in length; and

said at least a second two portions substantially aligned in said second direction are approximately 90-degrees in length.

10. The antenna configuration of claim 9, further comprising an additional portion substantially aligned in said first direction and coupling said at least a second two portions substantially aligned in said second direction, said additional portion being at an opposite end of said antenna configuration from said source.

11. The antenna configuration of claim 1, wherein at least one of said at least a first two portions substantially aligned in said second direction and said at least a second two portions substantially aligned in said second direction are bent in a third direction substantially orthogonal to both said first direction and said second direction.

12. The antenna configuration of claim 1, further comprising at least one capacitive storage node coupled between at least one of said at least a first two portions

substantially aligned in said second direction and said at least a second two portions substantially aligned in said second direction.

13. An antenna assembly, comprising:

at least two antenna configurations spaced apart from each other in a first direction, each of said at least two antenna configurations comprising:

at least three portions substantially aligned in a first direction and coupled together by at least a first two portions substantially aligned in a second direction substantially orthogonal to said first direction; and

at least a second two portions substantially aligned in said second direction and respectively coupled to at least two of said at least three portions substantially aligned in said first direction, wherein

electromagnetic fields to be radiated by said at least a first two portions substantially aligned in said second direction are substantially cancelled out by each other, and wherein

electromagnetic fields to be radiated by each of said at least three portions substantially aligned in said first direction are substantially in-phase with each other.

14. The antenna assembly of claim 13, wherein said at least two antenna configurations are spaced apart from each other by approximately 180-degrees.

15. An antenna configuration, comprising:

at least two portions substantially aligned in a first direction and coupled together by a first portion aligned in a second direction substantially orthogonal to said first direction, at least one of said at least two portions substantially aligned in said first direction being coupled to ground; and

at least a second portion substantially aligned in said second direction and coupled to at least one of said at least two portions substantially aligned in said first direction, wherein

electromagnetic fields to be radiated by each of said at least two portions substantially aligned in said first direction are substantially in-phase with each other.

16. The antenna configuration of claim 15, wherein at least one of said at least two portions substantially aligned in said first direction comprises a power source.

17. The antenna configuration of claim 16, wherein said power source comprises a radio-frequency source.

18. The antenna configuration of claim 16, wherein said first portion substantially aligned in said second direction is approximately 180-degrees in length.

19. The antenna configuration of claim 15, wherein said at least a second portion substantially aligned in said second direction is approximately 90-degrees in length.

20. An antenna, comprising:

a power source provided in a first portion aligned in a first direction;

first and second portions substantially aligned in a second direction substantially orthogonal to said first direction, each having one end connected to a respective end of the first portion aligned in said first direction;

a second portion substantially aligned in said first direction and connected to a second end of the first portion substantially aligned in said second direction;

a third portion substantially aligned in said first direction and connected to a second end of the second portion substantially aligned in said second direction; and

third and fourth portions substantially aligned in said second direction, a first end of each being respectively connected to one of said second and third portions substantially aligned in said first direction.

21. The antenna of claim 20, wherein each of said first and second portions substantially aligned in said second direction is approximately 180-degrees in length; and

each of said third and fourth portions substantially aligned in said second direction is approximately 90-degrees in length.

22. The antenna of claim 20, wherein each of said first, second, third and fourth portions substantially aligned in said second direction is approximately 90-degrees in length.

23. The antenna of claim 20, further comprising:

fourth and fifth portions substantially aligned in said first direction, a first end of each being respectively coupled to a second end of each of said third and fourth portions substantially aligned in said second direction; and

fifth and sixth portions substantially aligned in said second direction, a first end of each being respectively connected to a second end of each one of said fourth and fifth portions substantially aligned in said first direction.